

Message

From: Lytle, Darren [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=FDDE061DAB3E4DA78AACEE87490F09B9-LYTLE, DARREN]
Sent: 12/1/2021 3:53:37 PM
To: Onan, Brandon (EGLE) [OnanB@michigan.gov]; Ward, Aaron (DHHS) [WardA16@michigan.gov]; Donnelly, Peggy [donnelly.peggy@epa.gov]; Bosscher, Valerie [bosscher.valerie@epa.gov]; Tully, Jennifer [Tully.Jennifer@epa.gov]
CC: Rogers, Joan [rogers.joan@epa.gov]; Bauer, Candice [bauer.candice@epa.gov]; R5IMT_DOCS [R5IMT_DOCS@epa.gov]; Sewell, Jason [sewell.jason@epa.gov]; Justice, James [justice.james@epa.gov]
Subject: RE: Flushed free chlorine- Protocol question

Seems reasonable to me as well. Darren

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email: lytle.darren@epa.gov

From: Onan, Brandon (EGLE) <OnanB@michigan.gov>
Sent: Wednesday, December 1, 2021 9:32 AM
To: Ward, Aaron (DHHS) <WardA16@michigan.gov>; Donnelly, Peggy <Donnelly.Peggy@epa.gov>; Bosscher, Valerie <bosscher.valerie@epa.gov>; Tully, Jennifer <Tully.Jennifer@epa.gov>
Cc: Lytle, Darren <Lytle.Darren@epa.gov>; Rogers, Joan <rogers.joan@epa.gov>; Bauer, Candice <bauer.candice@epa.gov>; R5IMT_DOCS <R5IMT_DOCS@epa.gov>; Sewell, Jason <sewell.jason@epa.gov>; Justice, James <justice.james@epa.gov>
Subject: RE: Flushed free chlorine- Protocol question

I'm also good with just keeping the 5 min time frame.

Thanks for pulling together the flow rate data Val.

Brandon Onan, P.E.
Lead and Copper Unit Supervisor
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Michigan Department of Environment, Great Lakes, and Energy
(p) 616.307.6736
onanb@michigan.gov

From: Ward, Aaron (DHHS) <WardA16@michigan.gov>
Sent: Wednesday, December 1, 2021 9:29 AM
To: Donnelly, Peggy <Donnelly.Peggy@epa.gov>; Bosscher, Valerie <bosscher.valerie@epa.gov>; Onan, Brandon (EGLE) <OnanB@michigan.gov>; Tully, Jennifer <Tully.Jennifer@epa.gov>
Cc: Lytle, Darren <Lytle.Darren@epa.gov>; Rogers, Joan <rogers.joan@epa.gov>; Bauer, Candice <bauer.candice@epa.gov>; R5IMT_DOCS <R5IMT_DOCS@epa.gov>; Sewell, Jason <sewell.jason@epa.gov>; Justice, James <justice.james@epa.gov>
Subject: RE: Flushed free chlorine- Protocol question

That makes sense to me.

From: Donnelly, Peggy <Donnelly.Peggy@epa.gov>

Sent: Wednesday, December 1, 2021 8:59 AM

To: Bosscher, Valerie <bosscher.valerie@epa.gov>; Onan, Brandon (EGLE) <OnanB@michigan.gov>; Tully, Jennifer <Tully.Jennifer@epa.gov>; Ward, Aaron (DHHS) <WardA16@michigan.gov>

Cc: Lytle, Darren <Lytle.Darren@epa.gov>; Rogers, Joan <rogers.joan@epa.gov>; Bauer, Candice <bauer.candice@epa.gov>; R5IMT_DOCS <R5IMT_DOCS@epa.gov>; Sewell, Jason <sewell.jason@epa.gov>; Justice, James <justice.james@epa.gov>

Subject: RE: Flushed free chlorine- Protocol question

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I think the bottom line is that the flow is very variable per home. So, sticking with 5 minutes is a more conservative approach and makes sure we are getting to the water out in the main.

From: Bosscher, Valerie <bosscher.valerie@epa.gov>

Sent: Wednesday, December 1, 2021 8:49 AM

To: Onan, Brandon (EGLE) <OnanB@michigan.gov>; Tully, Jennifer <Tully.Jennifer@epa.gov>; Ward, Aaron (DHHS) <WardA16@michigan.gov>

Cc: Lytle, Darren <Lytle.Darren@epa.gov>; Donnelly, Peggy <Donnelly.Peggy@epa.gov>; Rogers, Joan <rogers.joan@epa.gov>; Bauer, Candice <bauer.candice@epa.gov>; R5IMT_DOCS <R5IMT_DOCS@epa.gov>; Sewell, Jason <sewell.jason@epa.gov>; Justice, James <justice.james@epa.gov>

Subject: RE: Flushed free chlorine- Protocol question

Here's a summary of the flow rate field data in Survey123 as of 11/23.

Flow rate (L/min)	Through Filter	Bypassing Filter
AVERAGE	1.825758	5.335
MAX	5.81	10.26
MIN	0.61	2.65

Thanks,
Val

From: Onan, Brandon (EGLE) <OnanB@michigan.gov>

Sent: Wednesday, December 1, 2021 6:39 AM

To: Tully, Jennifer <Tully.Jennifer@epa.gov>; Ward, Aaron (DHHS) <WardA16@michigan.gov>

Cc: Bosscher, Valerie <bosscher.valerie@epa.gov>; Lytle, Darren <Lytle.Darren@epa.gov>; Donnelly, Peggy <Donnelly.Peggy@epa.gov>; Rogers, Joan <rogers.joan@epa.gov>; Bauer, Candice <bauer.candice@epa.gov>; R5IMT_DOCS <R5IMT_DOCS@epa.gov>; Sewell, Jason <sewell.jason@epa.gov>; Justice, James <justice.james@epa.gov>

Subject: RE: Flushed free chlorine- Protocol question

What has the average flow rate been at homes in Benton Harbor? I ask because if the average flow rate is 1 gpm then we could essentially subtract 2 minutes from the initial 5 min flush and the data should be close to being relatable to the previous data collections (1 gallon is about 3.8 liters so 2 minutes is in that 7-8 liter range). If we would like to make this kind of a change I'm good with that.

I'm also okay with just keeping it at 5 minutes so that there is less confusion with field staff. I'm mostly concerned with what in the distribution system and 7 – 8 extra liters from a water main is not that significant, in my opinion.

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From: Tully, Jennifer <Tully.Jennifer@epa.gov>
Sent: Wednesday, December 1, 2021 7:30 AM
To: Onan, Brandon (EGLE) <OnanB@michigan.gov>; Ward, Aaron (DHHS) <WardA16@michigan.gov>
Cc: Bosscher, Valerie <bosscher.valerie@epa.gov>; Lytle, Darren <Lytle.Darren@epa.gov>; Donnelly, Peggy <Donnelly.Peggy@epa.gov>; Rogers, Joan <rogers.joan@epa.gov>; Bauer, Candice <bauer.candice@epa.gov>; R5IMT_DOCS <R5IMT_DOCS@epa.gov>; Sewell, Jason <sewell.jason@epa.gov>; Justice, James <justice.james@epa.gov>
Subject: Flushed free chlorine- Protocol question
Importance: High

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Hello Brandon and Aaron,

As you are aware we are adding an estimated service line sample (7th liter filtered, 8th liter unfiltered) for the filter screening study to attempt to challenge the filters with some higher Pb values. As I was finalizing the edits this morning I was thinking about the implications of this change on the free chlorine residuals we're collecting at each site. Previously there have been 2 liters collected from each site (maybe 3 liters depending on whether or not filtered water was available for ZeroWater TDS readings), then the water was flushed for 5 minutes and the first free chlorine reading was taken. If that reading came back <0.2 mg/L the water was flushed for another 5 minutes before a second reading.

Now that we'll be targeting the 7th and 8th liters a 5 minute flush after those samples will be collecting water from further out in the distribution system than the previous 5 minute flush. Is this acceptable? Would you still like an additional 5 minute flush (or perhaps a shorter flush time) if the first sample comes back <0.2 mg/L?

For consistency's sake we had kept the flush time after the samples are collected at 5 minutes but since there is already a body of data on chlorine residuals, chlorine residual measurements going forward would represent different volumes of water than the previous study weeks.

Jennifer Tully, Physical Scientist (she, her, hers)
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